SEVOFLURANE PRESCRIBING INFORMATION – Republic of Ireland

Name and composition: Sevoflurane Baxter, 100%, inhalation vapour, liquid. **Indications**: Induction and maintenance of general anaesthesia in adults and children.
Posology and Method of Administration: Premedication should be selected according to the need of the individual patient, and at the discretion of the anaesthesiologist. *Induction*. Individualise and titrate dose according to age, clinical status and patient response. May use after short acting barbiturate or intravenous induction agent. 0.5-1.0% in oxygen, with or without nitrous oxide, increasing by 0.5-1.0% increments as required (maximum 8%). Surgical anaesthesia usually produced in less than two minutes by inhalation of up to 5% in adults and up to 7% in children. *Maintenance.* 0.5-3% in oxygen with or without nitrous oxide. *Emergence*. Emergence times are generally short; therefore, patients may require post-operative pain relief earlier. *Elderly*. MAC decreases with increasing age. The average concentration to achieve MAC in an 80 year old is approximately 50% of that required in a 20 year old. *Paediatric population*. See Summary of Product Characteristics for MAC values for paediatric patients according to age. **Side effects:** *See SPC for detail.* As with all potent inhalational anaesthetics, can produce dose-dependent cardiac respiratory depression. Most of the adverse reactions are mild to moderate and transient. Nausea and vomiting reported postoperatively - may be due to a range of factors and is common following surgery under general anaesthesia. Most common in adults: hypotension, nausea and vomiting, in elderly patients: bradycardia, hypotension and nausea, in paediatric patients: agitation, cough, vomiting and nausea. *Very common* – agitation, bradycardia, hypotension, cough, nausea, vomiting. *Common* - somnolence, headache, dizziness, tachycardia, hypertension, respiratory disorder, respiratory depression, laryngospasm, airway obstruction, salivary hypersecretion, pyrexia, chills, abnormal blood glucose, abnormal liver function test, abnormal white blood cell count, increased blood fluoride, hypothermia. *Uncommon* – Confusion, Atrioventricular block complete, cardiac arrhythmias (including ventricular arrhythmias), atrial fibrillation, extrasystoles (ventricular, supra-ventricular, bigeminy-linked), apnoea, asthma, hypoxia, serum creatinine increased, *Unknown frequency* – Anaphylactic and anaphylactoid reactions, hypersensitivity, convulsion, dystonia, increased intracranial pressure, cardiac arrest, ventricular fibrillation, Torsades de Pointes, ventricular tachycardia, electrocardiogram QT prolongation, bronchospasm, dyspnoea, wheezing, breath holding, pancreatitis, hyperkalemia, muscle rigidity, hepatitis, hepatic failure, hepatic necrosis, jaundice, tubulointerstitial nephritis, dermatitis contact, pruritus, rash, swelling face, urticaria, chest discomfort, hyperthermia malignant, edema, seizures most frequently in paediatric use. **Precautions**: Only to be administered by people trained in general anaesthesia with appropriate emergency facilities. Monitor continuously, including electrocardiogram, blood pressure, oxygen saturation and end tidal carbon dioxide. The concentration being delivered must be known exactly and must be accomplished by using a vaporizer calibrated specifically for sevoflurane. Individualise dose based on patient's response as hypotension and respiratory depression increase as anaesthesia deepens. Due to sevoflurane insolubility in blood, haemodynamic changes may be more rapid than some other volatile agents. Cautious dosing for patients in any of these groups – weakened patients, hypovolaemic, hypotensive or otherwise haemodynamically compromised, impaired renal function (monitor post-operatively), obstetrics (consider uterus relaxation and haemorrhage), recent previous exposure to sevoflurane or other halogenated hydrocarbons, coronary artery disease (maintain haemodynamics to avoid myocardial ischaemia), in ICP-reducing procedures, seizures, underlying liver problems, concomitant drugs associated with liver dysfunction or haemodynamic compromise, history of hepatic injury, jaundice, unexplained fever or eosinophilia following other inhalational anaesthetics, pregnancy and lactation. Assess emergence before discharging from the post-anaesthesia care unit. Rapid emergence may prompt early post-operative pain relief and, in children, may evoke brief agitation and hinder cooperation. Dystonic movements seen in children. Consider risk of malignant hyperthermia, fatal outcomes have been reported. Associated with rare increases in serum potassium and cardiac arrhythmias and postoperative death in paediatric patients. Patients

with latent or overt neuromuscular disease, particularly Duchenne muscular dystrophy appear to be most vulnerable. Most cases were associated with concomitant use of succinylcholine. Consider QT prolongation, caution should be exercised when administering sevoflurane to susceptible patients. Isolated cases of ventricular arrhythmia in paediatric patients with Pompe's disease. Caution should be exercised when administering sevoflurane to patients with mitochondrial disorders. Regularly replace CO_2 absorbent lime, considering risk of exothermic reaction if dries out. Animal studies indicate a potential for renal injury at low flow rates. Sevoflurane exposure should not exceed 2 MAC hours at flow rates 1 to <2 L/min. Fresh gas flow rates < 1 L/min are not recommended. High prevalence and degree of bradycardia have been reported in children with Down syndrome during and following sevoflurane induction. **Contraindications**: Known or suspected hypersensitivity to sevoflurane or other halogenated anaesthetics, history of unexplained moderate to severe hepatic dysfunction with jaundice, history of confirmed hepatitis, fever and eosinophilia after sevoflurane, known or suspected genetic susceptibility to malignant hyperthermia. Patients in whom general anaesthesia is contraindicated. **Interactions:** Nitrous oxide, benzodiazepines or opiates decrease the MAC of sevoflurane. When combined with the opioids fentanyl, alfentanil or sufentanil may lead to synergistic fall in heart rate, blood pressure and respiratory rate. Increases the effect of non-depolarising muscle relaxants. May increase the negative ionotropic, chronotropic and dromotropic effects of beta blockers. Sensitisation of the myocardium to the arrhythmogenic effect of exogenously administered adrenaline. Metabolism may be increased by agents that increase the activity of cytochrome P450 isoenzyme CYP2E1 (eg isoniazid, alcohol). Concomitant use of sevoflurane and isoniazid can potentiate the hepatotoxic effect of isoniazid. Risk of acute hypertension with indirect-acting sympathomimetics (eg amphetamines, ephedrine). Observed atrioventricular impairment of conduction with verapamil. Severe hypotension and delayed emergence in patients treated long-term with St John's Wort. Sevoflurane is compatible with barbiturates. **Overdose**: Symptoms include respiratory depression and circulatory insufficiency. Discontinue anaesthetic and institute supportive measures. Maintain patient's airway and stable cardiovascular function. **Legal category:** POM **Marketing Authorisation Number and Holder:** PA2299/031/001 Baxter Holding B.V., Kobaltweg 49, 3542CE Utrecht, Netherlands. **Date of preparation:** June 2020. Further information available upon request.